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WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP
BRADFORD GREEN, BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER	
RAO, ANAND SHASHIKANT	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/621,259	HANNUKSELA ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/22/09 & the Office Action of 1/20/10*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. This Supplemental Final Rejection is being issued to correct certain typographical errors in the Office Action mailed on 1/20/10.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/28/09 has been entered.

3. Applicant's arguments with respect to claims 1-24 as filed on 10/28/09 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

A). In particular, the Examiner notes that the preamble of claim 23 fails to establish whether the subsequent limitations are elements of an apparatus or steps of a method.

Clarification and correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakraborty in view of Oh et al., (hereinafter referred to as "Oh").

Chakraborty discloses a method (Chakraborty: figures 2A-2B) comprising: retrieving in a decoder information (Chakraborty: column 6, lines 45-50) indicative of type of scene transition from an encoded video bitstream for identifying the type of scene transition (Chakraborty: column 1, lines 55-67), wherein the encoded video bitstream comprises a video sequence, the video sequence comprising at least a first scene and a second scene, the second scene comprising a scene transition from the first scene (Chakraborty: column 7, lines 50-60), wherein the scene transition comprises a number of frames and the scene transition is one of a number of scene transition types (Chakraborty: column 14, lines 35-50), as in claim 1. However, Chakraborty fails to disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition as in claim 1. Oh discloses disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition (Oh: column 10, lines 23-

28; column 11, lines 5-10) in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). Accordingly, given this teaching, it would have been obvious for one ordinary skill in the art at the time of the invention to incorporate the Oh teaching of applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition into the Chakraborty method in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). The Chakraborty method, now incorporating Oh error concealment procedure, has all of the features of claim 1.

Regarding claim 2, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein the identified type of scene transition is a scene cut (Chakraborty: column 1, lines 55-65), as in the claim.

Regarding claim 3, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein if a whole picture belonging to the scene cut is lost, the lost picture is not concealed (Oh: column 6, lines 55-65; column 5, lines 1-17), as in the claim.

Regarding claim 4, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein if part of a picture belonging to the scene cut is lost or corrupted, a spatial error concealment algorithm is applied to conceal the lost or corrupted part of the picture (Oh: column 1, lines 35-45), as in the claim.

Regarding claim 5, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein the identified type of scene transition is a gradual scene transition (Chakraborty: column 1, lines 55-60), as in the claim.

Regarding claim 6, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein the scene transition is a fade (Chakraborty: column 1, lines 55-65), as in the claim.

Regarding claim 7, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein the scene transition is a dissolve (Chakraborty: column 1, lines 55-65), as in the claim.

Regarding claim 8, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein the scene transition is a wipe (Chakraborty: column 1, lines 55-65), as in the claim.

Regarding claim 9, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein if a whole picture belonging to the gradual transition is lost or corrupted, a spatio-temporal error concealment algorithm is applied to conceal the lost or corrupted part of the picture (Oh: column 1, lines 35-45), as in the claim.

Regarding claim 10, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein if part of a picture belonging to the gradual transition is lost or corrupted, a spatio-temporal error concealment algorithm is applied to conceal the lost or corrupted part of the picture (Oh: column 1, lines 35-45), as in the claim.

Regarding claim 11, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein information indicative of the identified scene transition is provided to a decoder in a supplemental enhancement information message so as to allow the decoder to conceal the error based on said information (Chakraborty: column 11, lines 5-10), as in the claim.

Regarding claim 12, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein said information indicative of the identified scene transition includes an indication of a scene transition type (Chakraborty: column 1, lines 55-65), as in the claim.

Regarding claim 13, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein said information indicative of the identified scene transition is provided for each frame belonging to the transition (Chakraborty: column 1, lines 55-65), as in the claim.

Chakraborty discloses video encoding apparatus (Chakraborty: figure 1) comprising: an identifier module for identifying frames associated with a scene transition (Chakraborty: column 7, lines 30-50): wherein the apparatus configured for encoding a video sequence into an encoded video data stream, the video sequence comprising at least a first scene and a second scene and having the scene transition from the first scene, (Chakraborty: column 7, lines 50-60) wherein the scene transition comprises a number of frames and the scene transition is one of a number of scene transition types (Chakraborty: column 1, lines 55-67); and a multiplexing module for providing information about the type of scene transition in the encoded video data stream (Chakraborty: column 7, lines 15-32), as in claim 14. However, Chakraborty fails to disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition as in claim 14. Oh discloses disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition (Oh: column 10, lines 23-28;

column 11, lines 5-10) in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). Accordingly, given this teaching, it would have been obvious for one ordinary skill in the art at the time of the invention to incorporate the Oh teaching of applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition into the Chakraborty apparatus in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). The Chakraborty apparatus, now incorporating Oh error concealment procedure, has all of the features of claim 14.

Regarding claims 15-16, the Chakraborty apparatus, now incorporating Oh error concealment procedure, has wherein said information is provided for each frame belonging to the transition (Chakraborty: column 7,lines 15-25), as in the claim.

Chakraborty discloses a video decoding apparatus (Chakraborty: figure 1; column 6, lines 40-50) comprising: a demultiplexer module for retrieving information identifying a type of scene transition from an encoded video data stream (Chakraborty: column 1, lines 55-67), wherein the apparatus is configured to receive the encoded video data stream and to decode a video sequence from the encoded video data stream, the video sequence comprising at least a first scene and a second scene and the second scene comprising the scene transition from the first scene (Chakraborty: column 7, lines 50-60), wherein the scene transition comprises a number of frames and the scene transition is one of a number of scene transition types (Chakraborty: column 14, lines 35-50), and wherein the demultiplexer module is configured to provide the information indicative of the identified type of scene transition (Chakraborty: column 6, lines 30-40), as in claim 17. However, Chakraborty fails to disclose applying in a decoding process an error

concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition as in claim 17. Oh discloses disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition (Oh: column 10, lines 23-28; column 11, lines 5-10) in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). Accordingly, given this teaching, it would have been obvious for one ordinary skill in the art at the time of the invention to incorporate the Oh teaching of applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition into the Chakraborty apparatus in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). The Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has all of the features of claim 17.

Regarding claim 18, the Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has wherein the type of scene transition is retrieved from a supplemental enhancement information in the encoded video data stream (Chakraborty: column 1, lines 55-65), as in the claim.

Regarding claim 19, the Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has wherein the type of scene transition is a gradual scene transition and a whole picture belonging to the gradual scene transition is lost or corrupted (Oh: column 11, lines 1-13), said error concealment algorithm comprising a spatio-temporal error concealment algorithm for concealing the lost or corrupted picture (Oh: column 6, lines 55-65; column 5, lines 1-17), as in the claim.

Regarding claim 20, the Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has wherein the type of scene transition is a gradual scene transition and a part of a picture belonging to the gradual scene transition is lost or corrupted (Oh: column 11, lines 1-13), said error concealment algorithm comprising a spatio-temporal error concealment algorithm for concealing the lost or corrupted part of the picture (Oh: column 6, lines 55-65; column 5, lines 1-17), as in the claim.

Regarding claim 21, the Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has wherein the type of scene transition is a scene cut and a part of a picture belonging to the scene cut is lost or corrupted (Oh: column 11, lines 1-13), said error concealment algorithm comprising a spatial error concealment algorithm for concealing error in the picture (Oh: column 6, lines 55-65; column 5, lines 1-17), as in the claim.

Regarding claim 22, the Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has wherein the type of scene transition is a scene cut and a whole picture belonging to the scene cut is lost or corrupted (Oh: column 11, lines 1-13), said error concealment algorithm adapted to ignore the lost or corrupted picture (Oh: column 6, lines 55-65; column 5, lines 1-17), as in the claim.

Chakraborty discloses decoding apparatus (Chakraborty: figure 1; column 6, lines 40-50) comprising: means for receiving an encoded video data stream, wherein the encoded video data stream comprising a video sequence, the video sequence comprising at least a first scene and a second scene and having a scene transition from the first scene (Chakraborty: column 7, lines 50-60), wherein the scene transition comprises a number of frames and the scene transition is one of a number of scene transition types (Chakraborty:

column 1, lines 55-67), means for retrieving information from the received encoded video data stream to identify the type of scene transition (Chakraborty: column 7, lines 15-25), as in the claim 23. However, Chakraborty fails to disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition as in claim 23. Oh discloses disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition (Oh: column 10, lines 23-28; column 11, lines 5-10) in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). Accordingly, given this teaching, it would have been obvious for one ordinary skill in the art at the time of the invention to incorporate the Oh teaching of applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition into the Chakraborty apparatus in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). The Chakraborty decoding apparatus, now incorporating Oh error concealment procedure, has all of the features of claim 23.

Chakraborty discloses a video encoding apparatus (Chakraborty: figure 1) comprising: means for identifying frames associated with a scene transition (Chakraborty: column 7, lines 15-25), wherein the video encoding apparatus is configured for encoding a video sequence into an encoded video data stream, the video sequence comprising at least a first scene and a second scene and having the scene transition from the first scene (Chakraborty: column 7, lines 50-60), wherein the scene transition comprises a number of frames and the scene transition is one of a number of

scene transition types (Chakraborty: column 1, lines 55-65), as in claim 24. However, Chakraborty fails to disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition as in claim 24. Oh discloses disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition (Oh: column 10, lines 23-28; column 11, lines 5-10) in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). Accordingly, given this teaching, it would have been obvious for one ordinary skill in the art at the time of the invention to incorporate the Oh teaching of applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition into the Chakraborty apparatus in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). The Chakraborty apparatus, now incorporating Oh error concealment procedure, has all of the features of claim 24.

Chakraborty discloses method (Chakraborty: figures 2A-2B) for encoding a video sequence into an encoded video data stream, comprising: identifying frames associated with a scene transition (Chakraborty: column 1, lines 55-65), wherein the video sequence comprises at least a first scene and a second scene and having a scene transition from the first scene, wherein the scene transition comprises a number of frames and the scene transition is one of a number of scene transition types (Chakraborty: column 7, lines 50-60); and providing information for use in a decoding process about the scene transition type in the encoded video data stream (Chakraborty: column 7, lines 15-25), as in claim

25. However, Chakraborty fails to disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition as in claim 25. Oh discloses disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition (Oh: column 10, lines 23-28; column 11, lines 5-10) in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). Accordingly, given this teaching, it would have been obvious for one ordinary skill in the art at the time of the invention to incorporate the Oh teaching of applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition into the Chakraborty method in order to derive accurate motion vectors for error concealment (Oh: column 6, lines 58-62). The Chakraborty method, now incorporating Oh error concealment procedure, has all of the features of claim 25.

Regarding claim 26, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein said information is provided in a supplemental enhancement information message (Chakraborty: column 6, lines 50-55), as in the claim.

Regarding claim 27, the Chakraborty method, now incorporating Oh error concealment procedure, has wherein said information is provided for each frame belonging to the scene transition (Chakraborty: column 7, lines 15-25), as in the claim.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
/Andy S. Rao/
Primary Examiner, Art Unit 2621
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